

Hope vs. hype in stem cell research

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A few weeks ago CIRM grantee at UC Davis Paul Knoepfler wrote a blog entry distinguishing hype from hope in the stem cell research field. This is no small task. The hype in this field is incredible (as evidence, see all too many headlines on the topic). But then, so is the hope. CIRM was voted into existence by the 59% of Californians who had high hopes for therapies coming out of stem cell research.

When I talk to patient advocates who come to our board meetings, or who speak at our spotlights on disease or who we interview for our video series they are filled with hope for the field (see Roman Reed, for example, who is filled with hope). What's hard in writing or speaking about stem cell research is describing that hope without veering into hype. Those new therapies will come - but they'll take a while. Anyone who says differently is on the hype side of the equation.

My personal favorite of Knoepfler's Hope vs Hype statements is this one:

“ Many stem cell therapies that really work are available now. Verdict = HYPE

Unless you are talking about bone marrow transplants, which are a form of stem cell transplant and have a long history of treating a wide range of blood diseases, other so-called "stem cell therapies" are hype. No other type of stem cell has gone through all three phases of clinical trials to prove that those approaches are safe and effective. Several cell types - adult and embryonic - are in clinical trials right now, and some portion of those will likely end up being effective. But the majority of those early clinical trials that you read about will likely need refining and rethinking before they eventually work.

Knoepfler wrote his blog entry right around the time that Tim Caulfield wrote a piece for the Canadian journal *The Walrus* about a talk he gave deriding stem cell tourism. Caulfield is Canada Research Chair in health law and policy at the University of Alberta. Turns out, you shouldn't insult stem cell tourism - in which people travel to foreign countries where therapies aren't well regulated - while in front of a room full of people who run those clinics. Oops.

He relates stem cell tourism to former health claims for magnetism and radioactivity. He says:

“ Research on magnetism resulted in the sale of products promising magical restorative properties, curing everything from gout to constipation to paralysis. According to one advertisement from the late nineteenth century, "There need not be a sick person in Americaâ if our Magneto-Conservative Underwear would become a part of the wardrobe of every lady and gentleman, as also of infants and children." More dangerous was the excitement over atomic physics in the early 1900s. The work of scientists such as Marie Curie in the field of radiology garnered considerable public interest, which led to an array of radioactive products, including skin creams, toothpaste, bath salts, and pills.

Skin creams? That sound familiar to anyone following the stem cell field today? Obviously, radioactivity has turned out to be extremely useful as a form of cancer therapy, so there was some real hope in that hype. The trouble is telling the difference, and explaining that difference to people who might be swayed to hope when presented with hype.

Here's something to be hopeful about: 44 CIRM research projects are in various stages of making their way to the clinic. Many of these are in cancer, heart disease, and other diseases that directly affect my family members. That gives me hope.

A.A.

Tags: Knoepfler, caulfield